

CLAIMS:

1. A method for determining a position of an element (3) which is displaceable relative to a stator (2), the stator (2) comprising at least one transducer (4-7; 22-29), an electric signal being generated on the transducer (4-7; 22-29), so that a wave traveling in the surface of the stator (2) is generated, characterized in that at least part of the wave is reflected to the transducer (4-7; 22-29) by the displaceable element (3), the position of the displaceable element (3) relative to the stator (2) being determined by a processor on the basis of the reflected wave.
2. A method as claimed in claim 1, characterized in that at least two transducers (4-7; 22-29) are provided, waves being generated by means of a first transducer (4-7; 22-29) for displacing the displaceable element (3), and waves being generated by means of a second transducer (4-7; 22-29) for determining the position of the displaceable element (3).
3. A method as claimed in claim 2, characterized in that the frequency of the waves generated by means of the first transducer (4-7; 22-29) is different from the frequency of the waves generated by means of the second transducer (4-7; 22-29).
4. A method as claimed in any one of the preceding claims 1-3, characterized in that by means of at least two transducers (4-7; 22-29) waves are generated for determining the position of the displaceable element (3), which waves travel in the surface of the stator (2) transversely to each other.
5. A method as claimed in any one of the preceding claims 1-4, characterized in that the displaceable element (3) is disposed between at least two transducers (4-7; 22-29), the position being determined by means of the two transducers (4-7; 22-29).
6. A wave motor (1) comprising an element (3) displaceable relative to a stator (2), the stator (2) comprising at least one transducer (4-7; 22-29) by means of which a wave can be generated in the surface of the stator (2), characterized in that, in operation, the

position of the displaceable element (3) relative to the stator (2) can be determined by means of a processor from a wave reflected by the displaceable element (3).

7. A wave motor (1) as claimed in claim 6, characterized in that at least two
5 transducers (4-7; 22-29) are provided, the first transducer (4-7; 22-29) being instrumental in generating waves for the displacement of the displaceable element (3), the second transducer (4-7; 22-29) being instrumental in generating waves for determining the position of the displaceable element (3).
- 10 8. A wave motor (1) as claimed in claim 7 or 8, characterized in that waves for determining the position of the displaceable element (3) can be generated by means of at least two transducers (4-7; 22-29) which waves, in operation, travel transversely to each other in the surface of the stator (2).
- 15 9. A wave motor (1) as claimed in any one of the claims 7-9, characterized in that displaceable element (3) is disposed between at least two transducers (4-7; 22-29), in which the position of the displaceable element (3) can be determined by means of the two transducers (4-7; 22-29).